

Installation

Mac - <https://docs.docker.com/desktop/install/mac-install/>

Ubuntu - <https://docs.docker.com/engine/install/ubuntu/>

Windows - <https://docs.docker.com/desktop/install/windows-install/>

Docker Playground

<https://labs.play-with-docker.com/>

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Commands

1. Docker --help
2. Docker --version
3. Docker version --format '{{json .}}'
4. Docker info
5. Docker pull --help
6. Docker pull ubuntu:20.04 (uses a specific 'tag')
7. Docker pull redis (doesn't use a 'tag', so the latest version is pulled by default)
8. Docker image ls
9. Docker images
10. Docker run redis
11. Docker ps
12. Docker ps -a
13. Docker run -it redis
14. Docker run -d redis
15. Docker run -it -d redis
16. Docker run -it --name=akhilredis -d redis
17. Docker stats
18. Docker search redis

19. Docker search --filter=stars=3 --no-trunc redis
20. Docker search --filter=stars=3 --no-trunc --limit 10 redis
21. Docker start a8217c4c56 (also try name instead of ID here)
22. Docker stop a8217c4c56 (also try name instead of ID here)
23. Docker restart a8217c4c56 (also try name instead of ID here)
24. Docker pause a8217c4c56 (also try name instead of ID here)
25. Docker unpause a8217c4c56 (also try name instead of ID here)
26. Docker logs a8217c4c56 (also try name instead of ID here)
27. Docker exec -it a8217c4c56 bash (start bash inside the container, type exit to exit the bash)
28. Docker run -i -t --name=akhilredis -d redis /bin/bash
29. Docker exec 023828e786e0 apt-get update
30. Docker rename vibrant_yellow test (renames the container to "test", container can be running or stopped)
31. Docker rm test (you have to stop the container before removing it, also try this with container ID)
32. Docker stop \$(docker ps -a -q) (Stops all running containers)
33. Docker rm -f \$(sudo docker ps -a -q) (removes all stopped containers)
34. Docker inspect happy_faraday (also works with ID)
35. Docker kill happy_faraday (same as stop)
36. Docker kill \$(docker ps -q) (stops all running containers)
37. Docker system prune
38. To see dangling images in action

Cat > Dockerfile

```
FROM ubuntu:latest
CMD ["echo", "Hello World"]
```

Ctrl + D (close the file)

```
docker build -t my-image . //builds image from Dockerfile
docker images
```

//open up the editor in docker playground n make changes

```
FROM ubuntu:latest
CMD ["echo", "Hello World!"] (the exclamation is extra)
```

```
docker build -t my-image . //same command with same image name
docker images //now you will see dangling images
```

docker image prune -a // specifically works for dangling images

39. Docker attach <container_name> (opposite of -d, we will see this in action in the next step)
40. To work with cp command -
Docker run -i -t --name=akhilredis -d redis /bin/bash

`Touch test_file` (creates a test file in the current directory)

`Docker cp . akhilredis:/data` (copies everything from current directory to akhilredis container)

`Docker attach akhilredis` (attaches to akhilredis container)

`Ls` (you will see the file here)

41. List of processes running in a container - `Docker top <container_name>`
42. `Docker events` (run this command in a terminal and in a different terminal, run operations like starting a container etc. u will get all events in the first terminal)
43. `Docker container prune` (works specifically for containers)
44. `Docker volume create new-vol`
45. `Docker volume ls`
46. `Docker volume inspect new-vol`
47. `Docker volume rm new-vol` (volumes can only be removed if the container they're attached to is stopped)
48. `Docker volume prune`
49. Let's see an example of attaching vol to a container
Create a new vol -> `docker volume create new-vol`
`Docker run -d --name redisvol --mount source=new-vol,target=/app redis`
- Now if we try to delete the volume - `docker volume rm new-vol`
It won't work as it's assigned to a container, we can stop it and then delete
50. attaching a volume in read-only capacity
`Docker run -d --name redisvol2 --mount source=new-vol3,target=/app redis readonly`

For homework ->> SERVICE, NETWORK, COMPOSE, golang and nodejs projects